

**Health, Cumulative Risk,
Synergistic Effects,
and Multiple Pathways**

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Topic Area: Health, Cumulative Risk, Synergistic Effects, and Multiple Pathways

Action Item

Support Agency-wide efforts to develop scientifically valid standards for measuring cumulative risk.

Office of Solid Waste and Emergency Response

The Office of Solid Waste and Emergency Response (OSWER) continues to participate in the Science Policy Council's (SPC) effort to improve and expand EPA's risk assessments by addressing multiple sources and pathways, synergistic effects, cumulative exposure, and environmental justice. The SPC Subgroup on Multipathway-Multisource Human Exposure has outlined the tasks, with proposed time frames, necessary to move toward achieving this goal. OSWER is also working with the Office of Research and Development (ORD) in studies to evaluate cumulative risk by relating human exposure to chemical mixtures to epidemiological human health data for defined environmental justice populations/communities. In addition, OSWER continues to work with the National Environmental Justice Advisory Council (NEJAC) Health and Research Subcommittee in dealing with the issue of cumulative risk.

Contact

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Region 3

Cumulative risks may be the result of exposures to single or multiple contaminants from one or more sources. OSWER and other Agency programs generally consider site-specific risks without considering current exposure to other (non site-specific) pollution sources. Region 3 initiated a major study of environmental risk potentially affecting the health of residents of Chester, Pennsylvania. Participants in the study include the Pennsylvania Department of Environmental Protection (PADER), Delaware County, and Chester County. Participants from the community have been engaged to assist the Region by providing input to the study. The final study was completed on January 25, 1995, and is presently undergoing an internal peer review.

In order to explore cumulative risk issues, Region 3 is also funding a study of South/Southwest Philadelphia. Funding for this project became available with the passing of the fiscal year 1995 EPA budget where \$423,000 was allocated to Region 3 to perform the study. Johns Hopkins University was awarded the grant in January 1995 to perform the study with significant involvement from the local community groups.

Completed Milestones

- | | |
|------|--|
| 1/95 | Completed final draft of Chester study and initiated internal peer review. |
| 1/95 | Awarded grant to Johns Hopkins University. |

Contacts

Patrick Anderson, (215) 597-2393 (Chester study)

Len Mangiaracina, (215) 597-6666 (Philadelphia study)

Region 7

To support Agency-wide efforts to develop scientifically valid standards to measure cumulative risk, the Region 7 Superfund Branch has developed and distributed language to Region 7 Remedial Project Managers (RPMs) explaining that cumulative risk arises from exposures to multiple chemicals and exposures to releases from a Superfund site and other sources of environmental pollution. This language is to be used in all risk assessments, records of decision, and other documents containing information on EPA Region 7 Superfund sites. In coordination with Headquarters, the Region sought specific direction on how to incorporate cumulative risk factors into risk assessments.

Completed Milestones

- 6/94 Presented draft of cumulative risk language to the Region 7 Environmental Justice Workgroup.
- 6/94 Initiated coordination with Headquarters on cumulative risk.
- 9/94 Sent memorandum to RPMs with language explaining cumulative risk.

Contact

David Crawford, (913) 551-7702

Region 9

Region 9 is providing oversight of an Arizona Department of Environmental Quality (ADEQ) environmental justice pilot project funded by a grant from Headquarters. The pilot project will be used to support Agency efforts to develop scientifically valid standards to measure cumulative risk. The initial phase of the pilot project is a qualitative assessment to identify emissions impacting a low-income minority community in Southwest Phoenix that face multiple sources of risk. A future phase of the pilot project will entail a strategy for addressing the identified hazards. ADEQ has recruited a project manager and developed a draft community participation plan, formed a community-based committee to help guide the project, and has begun gathering and compiling data. ADEQ has also identified the concise project area and is scheduled to complete data acquisition and compilation in July 1995.

Completed Milestones

- 6/94 Awarded grant to ADEQ for environmental justice pilot project.
- 10/94 Formed community-based committee to guide project.
- 12/94 Completed community participation plan.

Contact

Karen Scheuermann, (415) 744-2068

In addition, Region 9 has undertaken an assessment to analyze cumulative risks. The project will analyze all States in the Region for demographics, race, and potential/measured sources of pollution. The goal of the project is to locate those communities impacted by numerous sources of pollution, but receiving insufficient attention from agencies to address these hazards. The Region chose pilot communities and developed an outreach plan.

Completed Milestones

2/95 Selected pilot communities and developed outreach plan.

Contacts

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Region 10

Region 10 risk assessors are continuing to participate in the Agency Science Policy Steering Committee and the Risk Assessment Forum to determine guidance for cumulative risk. Region 10 risk assessors are also participating in an assessment of cumulative risk to Native Americans on the Columbia River. The data from this assessment will be used to define exposure limits for all Regional actions. An initial draft of the quality assurance project plan has been written and is currently under internal review.

Completed Milestones

3/95 Participated in periodic Agency Science Policy Steering Committee and the Risk Assessment Forum.

3/95 Completed draft quality assurance project plan of the “Assessment of Chemical Contaminants in Fish Consumed by Four Native American Tribes in the Columbia River Basin” for internal review.

Contact

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Action Item

Evaluate health effects in communities with potential exposure to hazardous substances.

Office of Solid Waste and Emergency Response

In the summer of 1994, EPA requested assistance from the Public Health Service (PHS) to respond to the health concerns of communities living near hazardous waste sites. Health concerns included improving delivery of existing medical services to commu-

nities with potential exposures to hazardous substances and building environmental health expertise in communities through physician training and placement. In response to these concerns, the Medical Assistance Project (MAP) was developed. The purpose of the MAP is to enhance communities' access to appropriate health services in instances where contact with hazardous substances may have occurred. MAP is coordinated by the Superfund Medical Assistance Coordination Group and is being implemented by various PHS agencies in cooperation with EPA, State and local health departments, local health care providers, and members of communities living near hazardous waste sites. A pilot initiative which will provide important information about the costs, extent of use of the health services, and the impacts of these services on communities is underway at the Del Amo/Montrose Superfund site, Torrance, California; Newsom Brothers Superfund site, Columbia, Mississippi; Tuscon Airport Superfund site, Tuscon, Arizona; and the Southern Wood Piedmont site, Augusta, Georgia.

Completed Milestones

- 1/95 Announced funding for Del Amo/Montrose facility.
- 2/95 Presented Draft MAP to Superfund Medical Assistance Coordination Group.

Contact

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[Note: This entry is also reported under the Federal Interagency Cooperation topic area.]

Region 2

Region 2 and the Agency for Toxic Substances and Disease Registry (ATSDR) began a study of the St. Regis Mohawk Tribe to evaluate potential health effects resulting from exposure to polychlorinated biphenyl (PCB). The study was funded by a Federal grant to the New York Department of Health. Region 2 coordinated the effort with ATSDR and provided a peer review of the study. The report is titled "PCBs from Toxic Waste in a Population of Native Americans." It is anticipated that further activities with the St. Regis Mohawk Tribe may occur. Region 2 will continue to be involved in coordination and peer review efforts with ATSDR on the study of potential impacts of PCB exposures to the St. Regis Mohawk Tribe.

Completed Milestones

- 1/95 Completed "PCBs from Toxic Waste in a Population of Native Americans" report.

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[Note: This entry is also reported under the Federal Interagency Cooperation topic area.]